

IN THE CLAIMS:

Please add claims 34-53. After the entry of the instant amendment, the pending claims 1-5 and 25-53 will be:

1. (previously presented) A strain-measuring device including
a deformable element between two mounting contacts defining a fixation surface
for being fixed on a structure to be measured,
prestressing means of the deformable element,
measuring means of the stress undergone by the deformable element, and
treatment means of measurement signals,
characterized in that the prestressing means is extended between the two mounting
contacts and is arranged for drawing together these two mounting contacts in
translation and imposing a curvature of prestress to the deformable element, the
prestressing means being also arranged for allowing a relative displacement in
translation of these two mounting contacts when the deformable element is
prestressed.
2. (previously presented) The device according to claim 1, characterized in that the
prestressing means is freely mounted in translation in one of the mounting contacts and
are tied in translation to the other mounting contact .
3. (previously presented) The device according to claim 2, characterized in that the
prestressing means includes a prestressing rod, of which the part tied in translation to
the mounting contact is threaded and cooperates with a nut for displacing the mounting
contact and a compensation member arranged for exerting a return force between the
prestressing rod and one of the mounting contacts .
4. (previously presented) The device according to claim 1, characterized in that the
prestressing means is tied in translation to the two mounting contacts .

5. (previously presented) The device according to claim 4, characterized in that the prestressing means includes a prestressing rod, of which the parts tied in translation to the mounting contacts are threaded in an opposite direction, two nuts arranged for receiving the threaded parts from the prestressing rod and a compensation member arranged for exerting a return force between the mounting contacts .

Claims 6-24. (cancelled).

25. (previously presented) The device according to claim 1, characterized in that the deformable element is mounted by one of its ends in one of the mounting contacts by a technique chosen from the group comprising fitting, interlocking, screwing, riveting, gluing, and welding.

26. (previously presented) The device according to claim 25, characterized in that the mounting contact comprises a mounting zone for receiving an end of the deformable element, this mounting zone being inclined with respect to the fixation surface of the mounting contact in a manner to give to the deformable element an initial curvature in a direction of its prestress curvature.

27. (previously presented) The device according to claim 1, characterized in that the mounting contacts are for fixing on the structure to be measured by a technique chosen from the group comprising screwing, riveting, gluing, and welding.

28. (previously presented) The device according to claim 1, characterized in that the measuring means of the stress undergone by the deformable element is chosen from the group comprising resistive stress gauges, piezo-electric sensors, contactless proximity sensors, and vibration sensors.

29. (previously presented) The device according to claim 28, characterized in that the stress gauges are four in number and mounted as a Wheatstone bridge.

30. (previously presented) The device according to claim 1, characterized in that it comprises a protective housing partially covering the mounting contacts and the deformable element(s) .

31. (previously presented) The device according to claim 30, characterized in that the protective housing is waterproofed.

32. (previously presented) The device according to claim 30, characterized in that the treatment means comprises at an electronic conditioning circuit, this circuit being integrated with or coupled to the housing (90), or displaced and linked to the housing by means of communication.

33. (previously presented) The device according to claim 1, characterized in that the treatment means is arranged for measuring the internal temperature of the device and correcting the values of the signals as a function of this temperature.

Please add the following new claims:

34. (new) The device according to claim 3 wherein the nut is integrated with the corresponding mounting contact.

35. (new) The device according to claim 3 wherein the nut is defined by a tapped boring in the mounting contact.

36. (new) The device according to claim 3 wherein the prestressing means comprises a supplemental nut coupled to the end of the threaded part of the prestressing rod and forming a locking counter nut.

37. (new) The device according to claim 3 wherein the prestressing rod is chosen from the group comprising screws, bolts, and pins.

38. (new) The device according to claim 3 wherein the compensation member is chosen from the group comprising springs, elastic washers, wedges of elastomer, and leaf springs.

39. (new) The device according to claim 3 wherein there is no more than one deformable element, arranged between two identical mounting contacts approximately parallel to the fixation surface of these contacts and arranged for deforming itself in a plane approximately perpendicular to this surface.

40. (new) The device according to claim 39 wherein the prestressing means comprises two prestressing rods arranged parallelly and symmetrically with respect to the median plane passing through the deformable element.

41. (new) The device according to claim 39 wherein the prestressing means comprises a prestressing rod and a guiding rod arranged parallelly and symmetrically with respect to the median plane passing through the deformable element.

42. (new) The device according to claim 39 wherein the prestressing means comprises a prestressing rod arranged in the median plane passing through the deformable element.

43. (new) The device according to claim 42 wherein the deformable element comprises a central hollow of traverse dimensions superior to those of the prestressing rod.

44. (new) The device according to claim 3 wherein it comprises two deformable elements arranged between two identical mounting contacts symmetrically with respect to a median plane of the device, approximately perpendicular to the fixation surface of these contacts and arranged for deforming themselves in a plane approximately parallel to this surface.

45. (new) The device according to claim 44 wherein the prestressing means comprises a prestressing rod arranged in the median plane.

46. (new) The device according to claim 1 wherein it comprises two distinct mounting contacts and a common mounting contact.

47. (new) The device according to claim 46 wherein it comprises a deformable element extending between the common mounting contact and each distinct mounting contact, the deformable elements being angularly shifted from an angle α .

48. (new) The device according to claim 47 wherein the angle α is equal to a value chosen from the group comprising 30°, 45°, 60°, 90°, and 120°.

49. (new) The device according to claim 46, in that it includes three distinct mounting contacts and a common mounting contact, a deformable element extending between each pair of distinct mounting contacts, the deformable elements being arranged approximately in a triangle.

50. (new) The device according to claim 1 wherein the deformable element includes an elastic strip of a material chosen from the group comprising stainless steel with or without structural hardening, titanium alloys, and copper alloys with beryllium.

51. (new) The device according to claim 1 wherein the deformable element and the mounting contacts are formed from a single piece in a material of which the coefficient of dilatation is close to that of the structure to be measured, this material being chosen from the group comprising stainless steel with or without structural hardening, titanium alloys, copper alloys with beryllium, and aluminum alloys having a high elastic limit.

52. (new) The device according to claim 51 wherein the deformable element is manufactured or cut in a manner to give it an initial curvature in a direction of its prestress curvature.

53. (new) A method of measuring strain, the method comprising:

placing a deformable element between two mounting contacts on a structure;

prestressing the deformable element;

measuring the stress undergone by the deformable element, to produce a measurement signal; and

wherein prestressing includes drawing together the mounting contacts and imposing a curvature of prestress to the deformable element, to allow a relative displacement in translation of the mounting contacts when the deformable element is prestressed.